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June 20, 1994

Mr. William F. Caton
Secretary
Federal Communications Commission
Room 222
1919 M Street, N.W.
Washington, D.C. 20554

Re: *In the Matter of Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610 - 1626.5 / 2483.5 - 2500 MHz Frequency Bands*

CC Docket No. 92-166

Dear Mr. Caton:

Transmitted herewith for filing on behalf of Newcomb Communications, Inc. is an original and 5 copies of its Reply Comments in the above-referenced proceeding.

If you have any questions regarding this filing please contact the undersigned directly.

Sincerely,

Terri B. Natoli

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Counsel for Newcomb Communications, Inc.

[redacted]

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JUN 20 1994

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610 - 1626.5 / 2483.5 - 2500 MHz Frequency Bands To: The Commission	CC Docket No. 92-166

REPLY COMMENTS

Newcomb Communications, Inc. ("Newcomb"), by its attorneys, hereby submits its reply comments in the above-captioned proceeding and respectfully states as follows:

Background and Introduction

Newcomb is a licensee and operator of an interim radio-determination satellite service (RDSS) system in the 1610-1626.5 MHz (1.6 GHz) frequency band.[1] As such, it has a vital interest in the rules and policies proposed by the Commission in the Notice of Proposed Rulemaking (NPRM) released in February 1994, in the above-captioned proceeding.[2]

1 *Newcomb Communications, Inc.*, 8 FCC Rcd 3631 (1993) (hereinafter "Newcomb Authorization Order"). Newcomb's service is provided via L-Band payloads authorized by the Commission for incorporation aboard two domestic fixed-satellites licensed to GTE Spacenet Corporation to provide RDSS in the absence of a dedicated RDSS system. *See, Newcomb Authorization Order* at n.1.

2 In the Matter of Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610 - 1626.5 / 2483.5 - 2500 MHz Frequency Bands, *Notice of Proposed Rulemaking*, 9 FCC Rcd 1094 (1994) (hereinafter "NPRM"). Throughout these reply comments this proceeding shall be referred to as the "MSS Above 1 GHz Proceeding."

Approximately 33 parties filed pleadings in response to the NPRM which sought comment on a number of proposed rules and policies to govern the provision of Mobile Satellite Service (MSS) in the 1610-1626.5 / 2483.5-2500 MHz frequency bands.[3]

Of the numerous issues addressed by the commenting parties, two are of crucial importance to Newcomb. The first issue is one raised by Loral/Qualcomm ("Loral") wherein Loral purports to seek a *de facto* modification of Newcomb's previously-granted authorization to provide RDSS service in the 1.6 GHz band.[4] The second issue concerns the Commission's articulated Sharing Proposal found at page 17 of the NPRM which involves the assignment of frequencies within the 1.6 GHz band to the CDMA and FDMA/TDMA MSS technologies. In addition, Newcomb discusses the issue of continued use of geostationary satellites to provide RDSS service at 1.6 GHz. Newcomb will address each issue in turn below.

II. Loral/Qualcomm's Plea For Cessation of Current 1.6 GHz RDSS Transmissions Upon Launch Of An LEO MSS System Is An Unnecessary Condition For The Successful And Unimpeded Ability of LEO MSS Systems To Provide Service To The Public

At page 118 of its comments, Loral, an applicant for a low-earth orbit (LEO) MSS at 1.6 GHz implores the Commission to

> assure that temporary users of the [1.6 GHz] band are on notice that they must cease operations immediately upon launch of the first satellite by a licensed MSS/RDSS operator.[5]

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3 The Commission previously allocated these frequencies to MSS on a co-primary basis with RDSS and other services. *See,* In the Matter of Amendment of Section 2.106 of the Commission's Rules to Allocate the 1610 - 1626.5 MHz and the 2483.5 - 2500 MHz Bands for Use by the Mobile-Satellite Service, Including Non-geostationary Satellites, 9 FCC Rcd 536 (1994)

4 Comments of Loral/Qualcomm Partnership, L.P., CC Docket No. 92-166, filed May 5, 1994 at 118 (hereinafter "Loral Comments").

5 *Id.*

As a "temporary user" of the 1.6 GHz band, Newcomb would thus be required to cease providing its RDSS service once Loral, or one of the other applicants ultimately licensed in the MSS Above 1 GHz Proceeding launches its first MSS satellite. Loral's request, however, contravenes the express language of the Commission's order granting Newcomb temporary authority to operate its RDSS system at 1.6 GHz.[6] In that order the Commission clearly stated it would consider permitting Newcomb to continue operating at 1.6 GHz subject to certain conditions:

> "Any request for authority to operate after this date [date when LEO MSS system is launched] *will be entertained only if Newcomb can conclusively demonstrate* that its operations will not interfere with dedicated MSS operations in the band or if all operating MSS system licenses have agreed to Newcomb's guidelines." (*emphasis added*)[7]

Loral is now requesting that the Commission effectively modify the *Newcomb Authorization Order* to require Newcomb to cease immediate operation, upon launch of the first LEO/MSS system, irrespective of whether this system is placed into service, with no opportunity or avenue for seeking FCC authority to continue its operations upon a demonstration of non-interference.[8] Such a modification would run counter to existing Commission policy which recognizes and provides for continued use of the orbital spectrum by other than permanent licensees if such continued authority is consistent with the public interest.[9] In those cases where the Commission has

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6 *Newcomb Authorization Order*, 8 FCC Rcd 3631.

7 *Id.* at 3633.

8 Loral Comments at 119.

9 In other more established Part 25 satellite services the Commission frequently permits the use of temporary authorizations to maximize the use of an existing facility to provide service to the public so long as no adverse effects occur to permanently licensed systems. *See*, e.g., *GTE Spacenet Corporation*, 8 FCC Rcd 3078 (1993) and 5 FCC Rcd 1182 (1990), where the Commission authorized a fixed satellite to operate in an inclined-orbit at a temporary location. *See also*, *Comsat General Corporation*, 4 FCC Rcd 3820 (1989). Such temporary authorizations, are conditioned on no harmful interference to satellites operating in a normal station-keeping mode as well as the fact that they are not permitted to delay availability of new technology. Similarly, in the domestic fixed satellite area, special temporary authorizations are granted to extend the normal license term of satellites beyond the statutory 10 year term so long as such continued operations do not interfere with operations of a new licensee. *See, e.g.*, letter from James R. Keegan, Chief, Domestic Facilities Division to Peter G. Wolf, Western Union Telegraph Company, March 6, 1987, (STA for Westar III at 91° WL).

conditioned temporary authority until the launch of a satellite with a "permanent" license, the "permanent" licensee was authorized to occupy the same orbital location as the temporary licensee, thus leaving no opportunity for co-existence.[10] Such is not the case with Newcomb's authorization.

In making public interest determinations with regard to extending temporary, interim, or conditional authorizations, the Commission looks at a number of factors, not the least of which is the impact from a technical and operational perspective, on the permanent licensed systems authorized for the frequency band at issue. If it is determined that continued operation of the temporary system does not impair in any substantial or significant way the operations of a fully-licensed permanent system, and as long as other public interest factors are present, e.g., effective use of existing facilities; additional service availability to the public; avoidance of disruption in service to existing users, etc., the Commission would actually do a disservice to the public to refuse to entertain a request for continued temporary operational authority. Such would be the case if the Commission embraced Loral's instant request and eliminated any future opportunity on the part of Newcomb to demonstrate its ability to co-exist at 1.6 GHz with the MSS Above 1 GHz licensees.

Newcomb's system, which has been in operation since early 1992,[11] provides critical distress and safety services which mitigate the risk of dangerous, but essential, operations to its users. Newcomb's services are used by US government, law enforcement and commercial customers for the following types of applications:

- US Coast Guard search and rescue helicopter operations to enhance crew safety and search pattern verification.

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10 *See*, e.g., *ARC Professional Services Group*, 5 FCC Rcd 5398 (1990), *See also, Satellite Business Systems*, Mimeo No. 5207 (Com. Car. Bur. 1984), *See also, GTE Spacenet Corporation*, 5 FCC Rcd 1182 (1990).

11 *See*, letter from Chief, Domestic Facilities Division to Paul F. Newcomb (March 6, 1992) granting STA to begin operation.

- Military and civilian government flight operations to enhance search efforts and expedite rescue in the event of an accident.
- Law enforcement operations to reduce risk to officers during surveillance and pursuit.
- US Army Special Operations to track field maneuvers for improved coordination, safety and identification to enhance national defense efforts.

Newcomb's system is continually being evaluated for potential use for other critical applications, such as the Coast Guard's vessel tracking system, uses for which RDSS technology is uniquely capable of serving.[12] In short, Newcomb's system, as well that of another interim RDSS provider in the 1610 - 1626.5 MHz frequency band, Mobile DataCom,[13] have brought the benefits of RDSS technology to the public at the earliest possible date. While Newcomb and its users fully recognize the temporary nature of its authorization, Newcomb has always understood its authorization to provide it the opportunity to demonstrate the ability to operate without harmful interference to other licensed systems once those systems are launched. Loral, however, seeks to eliminate this opportunity altogether. Newcomb urges the Commission to deny Loral's request.

Since Newcomb filed its initial RDSS application July 1992, it has been working to develop a design for its mobile terminals that would enable its system to operate compatibly with the prospective LEO MSS licensees without the perceived harmful interference to those systems, articulated by the Commission in granting Newcomb's temporary authorization.[14] Moreover, Newcomb has been actively pursuing discussions with certain LEO MSS applicants to discuss

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12 The Commission has recognized that RDSS can provide end-users certain capabilities not currently available through other radio services. *See, Report and Order*, 50 Fed Reg 39101 (September 27, 1985) at para 4. (hereinafter "RDSS Allocation Order"). The primary benefits to public perceived by the Commission from RDSS include safety to human life, reduced transportation and labor costs, and improvements in navigation. *See, RDSS Allocation Order* at para 10. Each of these benefits derives to the public through Newcomb's current system. Moreover, the Commission has held that MSS and RDSS serve different customer needs. *See, Second Report and Order*, 104 FCC.2d 650, 658 (1986).

13 Letter to Counsel, Mobile Data Communications, Inc. from Chief Domestic Facilities Division, (August 19, 1993).

14 *Newcomb Authorization Order* at 3632.

future use of their space segment capacity if it becomes necessary to transition from the payloads aboard the GTE Spacenet satellites. As a condition precedent to the use of a future LEO MSS licensee's space segment for the continued provision of its RDSS service, Newcomb would be precluded from causing harmful interference to competing end-to-end RDSS and MSS services offered by these space segment licensees.

Newcomb is not, however, requesting that the Commission, at this time, pass on the question of whether or not its system could co-exist compatibly at 1.6 GHz with a permanent MSS system (although Newcomb is confident that such a showing can be made at the appropriate time). Neither is Newcomb requesting a change in status of its temporary authorization. Instead, Newcomb is merely urging the Commission to adhere to the terms of its original temporary authorization and to permit Newcomb to demonstrate, at the appropriate time, that its temporary authorization should be extended upon the showing that the Newcomb system can co-exist compatibly with a licensed LEO MSS system without causing adverse interference to the dedicated MSS system or affecting the operating parameters of such a system. If upon such opportunity, Newcomb is not successful in convincing the Commission that no interference will occur, then Newcomb will cease its operations and refile an application for a new RDSS system.[15]

Leaving the door open for Newcomb to demonstrate that its system will not cause interference to duly licensed systems, will neither "impair the effectiveness of the Commission's cut-off rules nor degrade the ability of the licensed system to provide service" as Loral suggests.[16] Newcomb's present system, even if its authorization is subsequently extended, will never enjoy the status, and the consequent benefits and rights, that will be enjoyed by those systems which will

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15 The Commission has recognized Newcomb's right to file an application for a new RDSS system to be considered in a new processing round once the initial round of MSS Above 1 GHz license applications have been processed. *See, Newcomb Authorization Order*, at 3633. This right is unaffected by the fact that Newcomb did not file an application that was considered with the initial processing round, and upon grant of such application, Newcomb's system would be afforded co-primary status with the LEO MSS licensees.

16 Loral Comments at 119.

eventually be fully licensed pursuant to the MSS Above 1 GHz Proceeding. Newcomb's present system will always remain subject to a non-interference condition and Newcomb will always bear the burden of assuring that such a condition is met. Contrary to Loral's assertion, the benefits that will accrue to those prospective LEO MSS licensees whose applications were filed prior to the June 3, 1991 cut-off date, will never apply to Newcomb's present system. As a result, neither Newcomb's present temporary authorization nor any subsequent extension of that authorization could adversely affect the Commission's cut-off rules and policies. Moreover, providing Newcomb the ability to demonstrate that its systems would not cause harmful interference would not, as Loral asserts, "degrade the ability of licensed systems to provide service."[17] By the explicit terms of its authorization, the Commission would not permit Newcomb to continue operating if its system caused harmful interference or required the licensed MSS system to reduce their system capacity.[18] Finally, Loral's request that Newcomb be precluded from demonstrating that its system does not cause harmful interference contravenes §25.163 (b) of the Commission's rules which expressly contemplates that applicants holding temporary authority to operate may file applications to extend that temporary operation beyond the termination date.[19]

Since receiving its temporary authorization in May 1993, Newcomb has fully complied with all the conditions imposed therein. On May 24, 1994 it submitted its annual report regarding the number of terminals constructed and other information required by the Commission. In addition, Newcomb has fully complied with all other requirements including informing its users of the interim nature of its authorization. To date, no interference complaints from other users of the 1.6 GHz band have been made. As such, as long as Newcomb continues to abide by these conditions, including no interference to future licensees of this band, the public interest will be served by allowing Newcomb to continue operating on a temporary basis, or at the very least, by

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17 *Id.*

18 *Newcomb Authorization Order* at 3632.

19 47 CFR §25.163 (b).

affording Newcomb the opportunity to demonstrate that it can continue to abide by the conditions of its temporary authorization at such time as a LEO MSS system is launched.

III. Newcomb Endorses Mobile DataCom's Alternative Sharing Proposal For LEO MSS CDMA And FDMA/TDMA Technologies

In the NPRM at paragraphs 30-38, the Commission set forth its proposed assignment scheme for dividing the 16.5 MHz of 1.6 GHz spectrum allocated for the LEO MSS systems between CDMA and FDMA/TDMA technologies. Under the Commission's proposed scheme, licensees proposing CDMA systems would use the first 11.35 MHz of spectrum, i.e., 1610 - 1621.35 MHz and licensees proposing FDMA/TDMA technology would use the remaining 5.15 MHz of spectrum, i.e., 1621.35 - 1626.5. If it was determined that too much spectrum was assigned initially to the CDMA technology the Commission further provided a scheme for the reduction of the CDMA assignment to 8.25 MHz. As a prospective user of a LEO MSS system employing CDMA technology, Newcomb has a vital interest in assuring that the assignment of spectrum to LEO MSS systems employing CDMA technology provides some degree of certainty to CDMA licensees, users and equipment vendors. This issue was aptly addressed, in detail, in the comments submitted by Mobile DataCom ("MDC") in this proceeding wherein MDC demonstrated that the assignment scheme proposed by the Commission would impose unnecessary costs and uncertainty on the use of CDMA technology.[20] In the interest of avoiding repetition, Newcomb incorporates the MDC Comments herein by reference and, wholeheartedly endorses the alternative scheme proposed by MDC. Under MDC's alternative proposal, the center 11.35 MHz of the 1.6 GHz spectrum would be assigned to CDMA rather than the first 11.35 MHz, with two equal 2.575 MHz assignments on either side for FDMA/TDMA systems. As MDC illustrated, uncertainty with respect to the center frequency of wideband CDMA systems could result in substantial unnecessary cost and disruption should the Commission subsequently decide to reduce the CDMA assignment

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20 *See, Comments of Mobile DataCom Corporation,* CC Docket No. 92-166, filed May 5, 1994, at Section 1.

to 8.25 MHz. This cost would be incurred in a number of ways and would affect space segment licensees as well as ground segment licensees and users.[21] MDC discussed these costs at length at pages 3-7 of its comments. Assigning the CDMA licensees to the center portion of the 16.5 MHz allocation, i.e., 1612.575 MHz to 1623.925 MHz band, would mitigate these costs through providing a uniform center frequency for all CDMA systems whether wideband or narrowband. Such an approach also would increase the Commission's flexibility in varying the amount of spectrum that may ultimately be reassigned either to increase or decrease the amount of CDMA spectrum available for LEO MSS systems.

Finally, by adopting MDC's alternative scheme, the Commission equitably assigns the spectrum so as not to disproportionately favor the FDMA/TDMA technology. Under the Commissions proposed frequency assignment scheme the CDMA licensees alone would bear the burden of potential coordination with the Russian Global Navigation System (GLOSNASS) which will operate on frequencies between 1602 and 1616 MHz. Under MDC's alternative scheme, both CDMA and FDMA/TDMA would share this coordination responsibility.

IV. The Commission Should Not Preclude The Provisions Of RDSS Service From Geostationary Satellites If Such Provision Of Service Serves The Public Interest

While the Commission's new proposed rules specifically provide that MSS systems licensed at 1610 - 1626.5 MHz must employ non-geostationary satellites,[22] no similar rule change is proposed for §25.141 of the rules governing the licensing of RDSS systems in that band. As such, MDC's comments correctly point out that the Commissions rules continue to permit RDSS systems via geostationary (GSO) satellites so long as the RDSS systems "demonstrate

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21 In other Part 25 services, the Commission has recognized the excessive cost and disruption to licensees and users that can occur if ground segment equipment must be repointed or provided with new crystals as a result of changed frequency assignments or orbital locations. *See, GE American Communications, Inc.*, 3 FCC Rcd 6871 (1988). Similar expense and disruption would occur to ground segment licensees and users of CDMA LEO MSS technology if the center frequency of a CDMA system were susceptible to change, this requiring retuning and new filters.

22 *See, NPRM* 9 FCC Rcd 1006 and 1152 (proposed §25.143(b)(2)(i)).

compatibility with licensed satellite systems in the same frequency band."[23] These licensed systems will include those licensees to be authorized at the conclusion of the MSS Above 1 GHz Proceeding. Newcomb supports the view that geostationary RDSS systems should continue to be authorized provided that those RDSS licensees demonstrate the ability for compatible operations, and no harmful interference to authorized LEO MSS operations at 1.6 GHz occurs. Like MDC, Newcomb is confident that it can demonstrate its ability to provide RDSS service via GSO satellites without adversely affecting the services provided by LEO MSS licensees. Should Newcomb determine, at a later time however, that obtaining capacity to provide RDSS service from an LEO MSS satellite licensee would better enable it to provide its RDSS service, or the more likely possibility, that, LEO MSS capacity were the only capacity available to enable Newcomb to operate,[24] the Commission should ensure that a regulatory environment exists which would enable RDSS service providers to reasonably obtain space segment capacity from LEO MSS Licensees in the absence of dedicated RDSS systems or follow-on GSO L-Band capacity.

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23 *Id.* at 1120 and 1151 (proposed §25.141(a))

24 Newcomb recognizes either of these occurrences would require additional FCC authority.

CONCLUSION

In conclusion, Newcomb urges the Commission to maintain the status quo with respect to Newcomb's current temporary authorization, an authorization which permits Newcomb to demonstrate that its system will not adversely affect newly licensed or operational LEO MSS systems. Moreover, Newcomb encourages the Commission to adopt MDC's alternative sharing proposal for assigning spectrum between the CDMA and FDMA/TDMA technology. Finally, to enhance the continued ability of both current and prospective RDSS licensees, authorized pursuant to §25.141, to provide RDSS service at 1.6 GHz, Newcomb submits that GSO satellites be permitted to be used, and that the regulatory environment for LEO MSS licensees ensures that RDSS licensees have the ability to reasonably obtain capacity.

Respectfully submitted,

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Date: June 20, 1994

CERTIFICATE OF SERVICE

I, Michelle D. O'Brien, hereby certify that I have on this 20th day of June 1994, copies of the foregoing Reply Comments of Newcomb Communications, Inc., were served by first class mail, postage prepaid, upon the following:

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